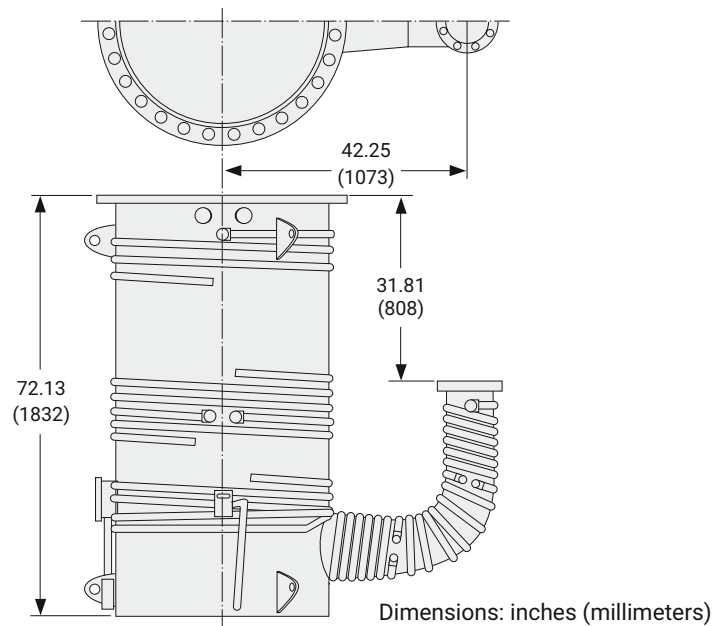


## NHS-35 Oil Diffusion Pump



Download 3d drawings [here](#).

The Agilent NHS-35 oil diffusion pump provides high throughput and high pumping speed of 28,000 L/s. With its fully optimized vapor jet, robust boiler design, and thermal protection switches, the pump will run without any maintenance for many years. This pump includes a standard sight glass and fill and drain assembly. It is available with a 35 in. ASA or DN 1000 ISO-F (bolted) inlet flange.

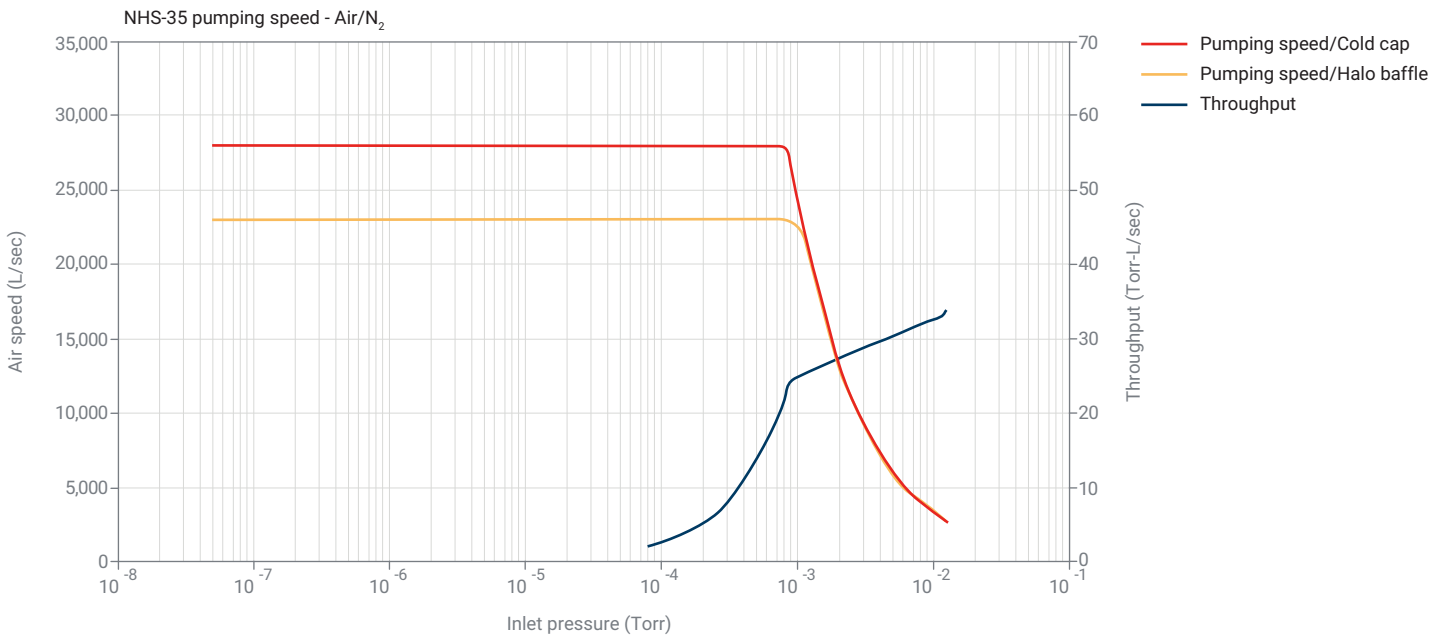
This diffusion pump is a perfect fit for industrial applications such as vacuum furnace, heat treatment, metallizing, and coating processes for optical lenses, electronics, and protective film layers.

## Technical specifications

Pumping Speed, Operating Range	28,000 L/s air, 35,000 L/s He and H <sub>2</sub>
Pumping Speed, AVS 4.1 (1963)	50,000 L/s air
Maximum Throughput	25 T-L/s (33 mbar L/s) in operating range, 35 T-L/s (45 mbar-L/s) at 0.01 Torr
Operating Range	$9 \times 10^{-4}$ to $<5 \times 10^{-8}$ Torr ( $1.2 \times 10^{-3}$ to $<6.5 \times 10^{-8}$ mbar)
Maximum Forepressure	No load: 0.55 Torr (0.71 mbar) Full load: 0.40 Torr (0.52 mbar)
Recommended Backing Pump	$\geq 300$ cfm (510 m <sup>3</sup> /hr)
Backstreaming Rate, Standard Cold Cap	$<5 \times 10^{-4}$ mg/cm <sup>2</sup> /min
Warmup Time	60 minutes
Cooldown Time	180 minutes (60 min with optional quick cool coil)
Fluid Charge	3 U.S. gallons (11.3 liters)
Electrical Requirements	3 ph, 50/60 Hz, 240/415/480 VAC
Pump Power	24,000 watts
Cooling Water Requirements	4 gpm (800 L/hr) at 60 to 80 °F (15 to 26 °C)
Recommended Fluid	DC-704 or equivalent
Thermowell	ISO 228 1/2 thread (with adapter M8x1 thread)
Recommended Holding Pump*	DS302 Rotary Vane Pump

\* Recommended holding pump sizes are based on estimates; assuming good vacuum practice in system design and operation.  
Results may vary from system to system.

Performance specifications based on tests done with DC704.



## Ordering information

Description	Voltage	Weight kg (lb)	Part Number	
			ASA	ISO
<b>NHS-35 Pump</b>				
NHS-35 with Standard Cold Cap	240 V	680.0 (1,550.0)	F1730308	L5924308
NHS-35 with Halo Baffle	240 V	680.0 (1,550.0)	F1730318	L5924318
NHS-35 with Standard Cold Cap	415 V	680.0 (1,550.0)	F1730326	L5924326
NHS-35 with Halo Baffle	415 V	680.0 (1,550.0)	F1730336	L5924336
NHS-35 with Standard Cold Cap	480 V	680.0 (1,550.0)	F1730309	L5924309
NHS-35 with Halo Baffle	480 V	680.0 (1,550.0)	F1730319	L5924319

Accessories	Weight kg (lb)	Part Number
Water-Cooled Halo Baffle	20.0 (45.0)	K1857335
Quick Cool Coil – Must Be Installed in the Factory, Can Not Ship Separately		Factory Special
Centering Ring for ISO Foreline Flange, 200K	0.5 (1.0)	IC200SV
O-ring, ISO Inlet Flange	0.5 (1.0)	78536002
Water Fittings Adapter Kit, 3/8 FPT to G 1/2		X3900-68011
<b>Replacement Parts (Six Heaters Required Per Pump)</b>		
Heater 4000 W, 240 V/480 V with Leads	0.5 (1.0)	647335010
Heater 4000 W, 240 V/480 V no Leads – Used on Pumps Built Before May 1990	0.5 (1.0)	647235248
Heater, 4000 W, 200 V	0.5 (1.0)	647335020
Heater, 4000 W, 400 V	0.5 (1.0)	L6383010
Heater, 4000 W, 440 V	0.5 (1.0)	L6383011
Heat Shield (Reusable)	0.5 (1.0)	L6370001
Heater Clamping Plate (Six Required Per Pump)	4.0 (8.0)	F1749001
HS-32/35 Heater Wire, 10 AWG, 196 Inches (Two Per Heater Required)	1.0 (0.4)	X3900-68003
Heater Insulator (One Required Per Pump)	0.5 (1.0)	L9699001
Replacement O-Ring Kit for ASA Pumps (Kit Contains: 1 Inlet Flange O-Ring), 1 Foreline Flange O-Ring, Sight Glass O-Ring and Gasket, 8 Fill and Drain O-Rings)	0.5 (1.0)	K0377169
Sightglass Service Kit (Pumps Built Before Oct. 1995)	1.5 (3.0)	F6097301
Sight Glass (Pumps Built After Oct. 1995)		L9223001
Upper (Water) Thermal Switch (Set at 200 °F/93 °C)	0.5 (1.0)	K9050005
Lower (Boiler) Thermal Switch (Set at 600 °F/316 °C)	0.5 (1.0)	K9050006
Cold Cap Gasket/Grommet (Kit of Four)	0.5 (1.0)	L8839301
Cold Cap Nut And Follower (Two Each)	0.5 (1.0)	L8840301

- Inlet flange 35 in. ASA, foreline flange 6 in. ASA.
- Inlet flange DN 1000 ISO-F, foreline flange ISO DN 200 ISO-K.
- Not recommended for use with Santovac 5.
- ASA pump versions include O-rings for both inlet and foreline flanges.
- ISO pump versions include inlet flange O-ring, but does not include foreline flange centering ring.

[www.agilent.com/en/product/vacuum-technologies/diffusion-pumps/large-diffusion-pumps/nhs-35-diffusion-pump](http://www.agilent.com/en/product/vacuum-technologies/diffusion-pumps/large-diffusion-pumps/nhs-35-diffusion-pump)

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